

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-105 (canceled)

106. (new): A vector comprising:

(a) a polynucleotide encoding an amplifiable selectable marker;
(b) a polynucleotide encoding a green fluorescent protein (GFP); and
(c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the polynucleotide encoding the amplifiable selectable marker is fused to the polynucleotide encoding the GFP to form a fusion polynucleotide, wherein the fusion polynucleotide is operably linked to the promoter.

107. (new): The vector of claim 106, wherein the amplifiable selectable marker is DHFR.

108. (new): The vector of claim 106, further comprising an intron between the promoter and the polynucleotide encoding the desired product, the intron defined by a 5' splice donor site and a 3' splice acceptor site.

109. (new): The vector of claim 108, wherein the intron provides a splicing efficiency of at least 95%.

110. (new): The vector of claim 108, wherein the fusion polynucleotide is positioned within the intron.

111. (new): The vector of claim 108, further comprising an internal ribosome entry site (IRES) between the polynucleotide encoding the desired product and the fusion polynucleotide.

112. (new): A vector comprising:

(a) a polynucleotide encoding an amplifiable selectable marker;
(b) a polynucleotide encoding a green fluorescent protein (GFP); and

(c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the vector further comprises 3' of the promoter: an intron defined by a 5' splice donor site and a 3' splice acceptor site providing a splicing efficiency of at least 95%, and an IRES, and wherein the polynucleotide encoding the desired product is positioned between the intron and the IRES.

113. (new): The vector of claim 112, wherein the polynucleotide encoding the amplifiable selectable marker is positioned in the intron and the polynucleotide encoding the GFP is positioned 3' of the IRES, and wherein the polynucleotide encoding the amplifiable selectable marker is operably linked to the promoter.

114. (new): The vector of claim 112, wherein the polynucleotide encoding the GFP is positioned in the intron and the polynucleotide encoding the amplifiable selectable marker is positioned 3' of the IRES, and wherein the polynucleotide encoding the GFP is operably linked to the promoter.

115. (new): A vector comprising: a first transcription unit comprising a first promoter, an intron positioned 3' to the first promoter, and a first polynucleotide encoding a first desired product positioned 3' to the intron; and a second transcription unit comprising a second promoter and an intron positioned 3' of the second promoter; wherein the intron in the first transcription unit is the first intron, and the intron in the second transcription unit is the second intron, and wherein each of the first and the second introns is defined by a 5' splice donor site and a 3' splice acceptor site providing a splicing efficiency of at least 95%, wherein the vector further comprises a polynucleotide encoding an amplifiable selectable marker and a polynucleotide encoding a fluorescent protein, and wherein the first polynucleotide encoding the first desired product and the first promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the fluorescent protein.

116. (new): The vector of claim 115, wherein the fluorescent protein is a GFP.

117. (new): The vector of claim 116, wherein the amplifiable selectable marker is selected from the group consisting of dihydrofolate reductase (DHFR) and glutamine synthetase.

118. (new): The vector of claim 117, wherein the amplifiable selectable marker is DHFR.
119. (new): The vector of claim 116, wherein the GFP is a mutant GFP.
120. (new): The vector of claim 119, wherein the mutant GFP exhibits a higher fluorescence intensity than the wild-type GFP.
121. (new): The vector of claim 119, wherein the mutant GFP is GFP-S65T having a serine to threonine substitution in amino acid 65 of the wild-type GFP of *Aequorea victoria*.
122. (new): The vector of claim 116, wherein the polynucleotide encoding the amplifiable selectable marker is positioned in the first intron, wherein the polynucleotide encoding the amplifiable selectable marker and the polynucleotide encoding the desired product are both operably linked to the first promoter, and wherein the polynucleotide encoding the GFP is positioned 3' of the second intron and operably linked to the second promoter.
123. (new): The vector of claim 116, wherein the second transcription unit further comprises a second polynucleotide encoding a second desired product positioned 3' of the second intron, and wherein the second polynucleotide encoding the second desired product is operably linked to the second promoter.
124. (new): The vector of claim 123, wherein the polynucleotide encoding the amplifiable selectable marker is positioned in the first intron and operably linked to the first promoter, and the polynucleotide encoding the GFP is positioned in the second intron and operably linked to the second promoter.
125. (new): The vector of claim 123, wherein the polynucleotide encoding the GFP is positioned in the first intron and operably linked to the first promoter, and the polynucleotide encoding the amplifiable selectable marker is positioned in the second intron and operably linked to the second promoter.
126. (new): The vector of claim 123, further comprising an IRES positioned 3' of the second polynucleotide encoding the second desired product.
127. (new): The vector of claim 126, wherein the polynucleotide encoding the amplifiable selectable marker is positioned in the first intron and operably linked to the first promoter, and the polynucleotide encoding the GFP is positioned 3' of the IRES and operably linked to the second promoter.

128. (new): The vector of claim 123, wherein the polynucleotide encoding the amplifiable selectable marker is fused to the polynucleotide encoding the GFP to form a fusion polynucleotide positioned in the first intron.

129. (new): The vector of claim 128, wherein the second transcription unit further comprises a polynucleotide encoding a selectable marker positioned in the second intron and operably linked to the second promoter.

130. (new): The vector of claim 123, wherein the first transcription unit further comprises an IRES positioned 3' of the first polynucleotide encoding the first desired product.

131. (new): The vector of claim 123, wherein the polynucleotide encoding the amplifiable selectable marker and the polynucleotide encoding the GFP are fused to form a fusion polynucleotide positioned 3' of the IRES and operably linked to the first promoter.

132. (new): The vector of claim 124, wherein the second transcription unit further comprises a polynucleotide encoding a selectable marker positioned in the second intron and operably linked to the second promoter.

133. (new): The vector of claim 123, wherein the second transcription unit further comprises an IRES positioned 3' of the second polynucleotide encoding the second desired product, wherein the IRES in the first transcription unit is the first IRES, and the IRES in the second transcription unit is the second IRES.

134. (new): The vector of claim 133, wherein the polynucleotide encoding the amplifiable selectable marker is positioned 3' of the first IRES and operably linked to the first promoter, and polynucleotide encoding the GFP is positioned 3' of the second IRES and operably linked to the second promoter.

135. (new): The vector of claim 123, wherein the first promoter and the second promoter are the same type of promoter.

136. (new): The vector of claim 135, wherein the first promoter and the second promoter are the CMV or the SV40 promoter.

137. (new): The vector of claim 123, wherein at least one of the promoters is inducible.

138. (new): A vector comprising: (a) a polynucleotide encoding an amplifiable selectable marker; (b) a polynucleotide encoding a green fluorescent protein (GFP); and (c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the promoter is the cytomegalovirus immediate early (CMV) promoter.

139. (new): A vector comprising: (a) a polynucleotide encoding an amplifiable selectable marker; (b) a polynucleotide encoding a green fluorescent protein (GFP); and (c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the polynucleotide encoding the desired product encodes a protein selected from the group consisting of neuronotrophin-3, deoxyribonuclease, vascular endothelial growth factor, immunoglobulin and Her2 receptor.

140. (new): The vector of claim 123, wherein the first polynucleotide encoding the first desired product encodes an immunoglobulin heavy chain and the second polynucleotide encoding the second desired product encodes an immunoglobulin light chain.

141. (new): The vector of claim 123, wherein the first polynucleotide encoding the first desired product encodes one polypeptide chain of a multichain receptor, and the second polynucleotide encoding the second desired product encodes a second polypeptide chain of the receptor.

142. (new): The vector of claim 116 that replicates in a eukaryotic host cell.

143. (new): A host cell comprising a vector selected from the group consisting of:
(a) a vector comprising: i) a polynucleotide encoding an amplifiable selectable marker; ii) a polynucleotide encoding a fluorescent protein; and iii) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (1) operably linked to the

polynucleotide encoding the amplifiable selectable marker, or (2) operably linked to the polynucleotide encoding the fluorescent protein; (b) a vector of claim 106; and (c) a vector of claim 115.

144. (new): The host cell of claim 143, wherein the cell is a mammalian cell.

145. (new): The host cell of claim 144, wherein the mammalian cell is a Chinese Hamster Ovary (CHO) cell.

146. (new): The host cell of claim 145, wherein the amplifiable selectable marker is DHFR and the CHO cell has a DHFR-minus phenotype.

147. (new): The host cell of claim 145, wherein the desired product is selected from the group consisting of neuronotrophin-3, deoxyribonuclease, vascular endothelial growth factor, immunoglobulin and Her2 receptor.

148. (new): A kit comprising a container containing a vector selected from the group consisting of (a) a vector comprising: i) a polynucleotide encoding an amplifiable selectable marker; ii) a polynucleotide encoding a fluorescent protein; and iii) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (1) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (2) operably linked to the polynucleotide encoding the fluorescent protein; (b) a vector of claim 106; and (c) a vector of claim 115.

149. (new): A method of producing a desired product comprising culturing a suitable eukaryotic cell comprising a vector selected from the group consisting of (a) a vector comprising: i) a polynucleotide encoding an amplifiable selectable marker; ii) a polynucleotide encoding a fluorescent protein; and iii) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (1) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (2) operably linked to the polynucleotide encoding the fluorescent protein; (b) a vector of claim 106; and (c) a vector of claim 115, under conditions so as to express the desired product, and recovering the desired product.

150. (new): The method of claim 149 wherein the desired product is recovered from the culture medium.

151. (new): A method of obtaining a cell expressing a desired product, the method comprising:

a) introducing into a population of eukaryotic cells a vector comprising: (i) a polynucleotide encoding an amplifiable selectable marker; (ii) a polynucleotide encoding a green fluorescent protein (GFP); and (iii) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (1) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (2) operably linked to the polynucleotide encoding the GFP; and

b) isolating the cells of step a) that express the GFP and the amplifiable selectable marker, wherein expression of the GFP and the amplifiable selectable marker is indicative of the cell also expressing the desired product.

152. (new): The method of claim 151, wherein the vector is a vector of claim 115.

153. (new): The method of claim 152, wherein the step of isolating cells expressing the GFP comprises sorting for and cloning the brightest 1%-10% of fluorescent cells, wherein the sorting and cloning are performed using a fluorescence activated cell sorter.

154. (new): The method of claim 153, wherein the cells are subjected to two or more rounds of sorting, wherein the cells are cultured for a period of time between each round.

155. (new): The method of claim 154, wherein the cells are cultured for about two weeks between each round of sorting.

156. (new): The method of claim 155, wherein the cells are cultured in selection medium comprising an amplifying agent.

157. (new): The method of claim 153, wherein the brightest 1%-10% of fluorescent cells are cultured in selection medium comprising an amplifying agent.

158. (new): The method of claim 156 or 157, wherein the amplifiable selectable marker is DHFR and the amplifying agent is methotrexate.

159. (new): The method of claim 157, further comprising analyzing the cells after culture with amplifying agent, for expression of the desired product.

160. (new): The method of claim 159, wherein the cells are analyzed for RNA encoding the desired product by RT-PCR, the amount of RNA indicative of the level of production of the desired product.

161. (new): A vector comprising: (a) a polynucleotide encoding an amplifiable selectable marker; (b) a polynucleotide encoding a green fluorescent protein (GFP); and (c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the polynucleotide encoding the GFP is fused to a polynucleotide encoding a heterologous polypeptide.

162. (new): A vector comprising: (a) a polynucleotide encoding an amplifiable selectable marker; (b) a polynucleotide encoding a green fluorescent protein (GFP); and (c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP, wherein the desired product is a protein selected from the group consisting of cytokines, lymphokines, enzymes, antibodies, and receptors.

163. (new): A method of obtaining a cell expressing a desired product, the method comprising:

- a) introducing into a population of eukaryotic cells a vector comprising: i) a polynucleotide encoding an amplifiable selectable marker; ii) a polynucleotide encoding a fluorescent protein; and iii) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (1) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (2) operably linked to the polynucleotide encoding the fluorescent protein; and
- b) isolating the cells of step a) that express the fluorescent protein, wherein expression of the fluorescent protein indicative of the cell also expressing the desired product.

164. (new): A method of obtaining a cell expressing a desired product, the method comprising:

introducing into a population of eukaryotic cells a vector comprising: (a) a polynucleotide encoding an amplifiable selectable marker; (b) a polynucleotide encoding a green fluorescent protein (GFP); and (c) a polynucleotide encoding a desired product, wherein the polynucleotide encoding the desired product is operably linked to a promoter, and wherein the polynucleotide encoding the desired product and the promoter are (i) operably linked to the polynucleotide encoding the amplifiable selectable marker, or (ii) operably linked to the polynucleotide encoding the GFP; and

isolating the cells of step (a) that express the fluorescent protein, wherein expression of the fluorescent protein is indicative of the cell also expressing the desired product.